

SOPIN, Ye.F.

MD
Effect of histidine on the metabolism of phosphorus in
animal organism. E. F. Sopin. Nauch. Zapiski Kiev.
Univ. 12, No. 7, 157-8(1953); Referat. Zhur., Khim. 1954,
No. 48319.—Intramuscular injection of histidine (I) to
guinea pigs decreased the amt. of total P in muscle 190.6-
148.5 mg. %, the decrease being made by all fractions of
org. P, while inorg. P and P of phosphocreatine were nearly
unchanged. The same observations were made with rabbits.
When I was fed to cows, the amt. of acid-sol. P compds. in
the blood was decreased. B. Wierzbicki

Sopin, E. F.

✓ 2584. Metabolism of phosphorus compounds in B_1 -avitaminosis as a state of inadequate functioning of the parasympathetic nervous system. E. F. Sopin and G. I. Marinich Nauk. Zap. Kyiv Univ. Ktsu, 1954, 13, 200-213; Riferat. Zh. biol. Khim., 1958, Abstr. No. 13357.—In the pigeon under B_1 -avitaminosis it was found that

compared to normal there is a diminished content of general P in the brain, of inorg. P, creatine phosphate P and ATP P in the muscles; and an increased content of lipid P in the brain and of P compounds which are difficult to hydrolyse in all the tissues investigated (brain, muscle, liver). On complete starvation there was a decreased content of general and lipid P in the liver and brain and content of inorg. P + creatine phosphate and ATP in the muscles. It was shown that in avitaminosis of B_1 , as distinct from complete starvation a tendency was observed for the accumulation of org. P. Considering that in B_1 avitaminosis consequent on the diminished synthesis of ACh the sympathetic innervation predominates, it is concluded that the sympathetic innervation favours the synthesis and accumulation of bound forms of P compounds while the parasympathetic innervation favours the disintegration of these compounds. (Russian)

J. HARDING

2

Sopin, E. F.

5562. Estimation of sulphur in tissues. E. P. Sopin and L. K. Dil.
Nauk. Zap. Kyiv. Univ., Kiev, 1864, 18, 215-218; Referat. Zb. Biol. Khim., 1956, Akad. No. 16103.—The tissue is oxidized with conc. HNO_3 and H_2O_2 . The colourless liquid is evaporated to dryness and the residue dissolved in water. Bonsidine-HCl dissolved in dil. HCl is added, the ppt. centrifuged off and dissolved in 10% HCl to 10 ml. To 2 ml. of this soln. are added 1 ml. 0.5% $FeCl_3$ and 1 ml. 10% H_2O_2 , the vol. brought to 10 ml. with 10% HCl, and after 5 min. the colour is measured in a colorimeter. Non-protein S is estimated by TCA deproteinization, evaporation of the filtrate to near dryness, addition of perhydroxyl, and thence as in estimation of total S. D-avitaminosis in rats did not markedly change from normal the S content of both liver fractions or the total S of muscle. In the muscle, the content of non-protein S was somewhat raised and acid-insoluble S somewhat lowered. (Russian)

T. R. Parsons

SOPIN, Ye.F.

Importance of I.P. Pavlov's teachings for the development of
Russian biochemistry. Nauk.zap.Kiev.un. 13 no.6:45-54 '54.
(MLRA 9:10)

(PAVLOV, IVAN PETROVICH, 1849-1936) (BIOCHEMISTRY)

SOPIN, E. P.

✓ 8978. Phosphorus metabolism in animal tissues during complete starvation. E. F. Sopin *Biochim. Zh. Kiev*, 1955, 27, 89-93; *Referat Zh. Biokh.* 1956, Abstr. No. 50,500.—Pigeons receiving water only, which had lost 40-50% wt. as a result of starvation were examined for their total P content and the intensity of its metabolism, creatine phosphate, ATP, P of compounds difficult to hydrolyze and lipid P. Using ^{32}P , the intensity of P compound metabolism was investigated in the liver, muscles, and brain. In the liver inorg. P, creatine phosphate, and ATP increased in amount with the simultaneous decrease of lipid P and that of compounds difficult to hydrolyze; the intensity of P turnover of all fractions except lipid P was also decreased. In the muscles, the amount of all fractions except inorg. P remained unchanged, their turnover, however, except for compounds difficult to hydrolyze, was decreased. In the brain total P and lipid P decreased; the turnover of inorg. P, creatine phosphate, ATP, and P of compounds difficult to hydrolyze, decreased. (Ukrainian) A. K. GRZYBOWSKI

SOPIN E. F.

The phosphoprotein metabolism in disturbed carbohydrate metabolism in the animal organism. E. P. Sopin and R. P. Samoilova (T. G. Shevchenko State Univ., Kiev). *Ukrain. Biokhim. Zhur.* 28, 418-23 (Russian summary, 424) (1956). — Expts. were performed with rats and pigeons. Studies were made of the rates of renewal of phosphoproteins and of the activity of protein phosphatase in alloxan diabetes and in Biavitaminosis of the brain, the muscles, and of the liver. $\text{KH}_2\text{P}^{32}\text{O}_4$ was injected into the animals one hr. before killing at the rate of 4000 impulses/min./g. of animal body wt. The rate of P^{32} inclusion into the proteins in alloxan diabetes and in Biavitaminosis was increased. The same was true of the activity of protein phosphatase. The rate of inclusion of inorganic P^{32} into the liver, muscle tissue, and the brain under the conditions of the expts. was also increased, but the total inorg. P was somewhat lower. B. S. Levine

Mark. 2

USSR/Human and Animal Physiology - (Normal and Pathological)
Metabolism. Water and Salt Exchanges.

T-2

Abs Jour : Ref Zhur - Biol., No 11, 1958, 50562
Author : Sopin, Ye.F.
Inst : University of Kiev.
Title : Sulfur Metabolism in D-Avitaminoses.
Orig Pub : Nauch. zap. Kievsk, un-t, 1956, 15, No 11, 95-98.

Abstract : Methionine-S³⁵ was administered to healthy rats and to rats with D-avitaminosis. After a 24 hour interval the total amount of nonprotein and protein sulfur in the liver and in the muscles was determined, as well as radioactivity of these fractions. It was demonstrated that D-avitaminosis leads to a delay in the restoration of all S fractions in the muscles, yet does not affect S restoration in the liver.
-- V.I. Rozengart.

Card 1/1

- 9 -

SOPIN, Ye.P.

[Bases in the study of vitamins] Osnovy vcheniya pro vitaminy.
Kyiv, Radians'ka shkola, 1957. 214 p. (MIRA 13:8)
(VITAMINS)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5

FERDMAN, D.L.; SOPIN, Ye.F.; VOYNAR, A.I., red.; LIPKINA, T.G., red.izd-vs;
GAMZAYEVA, M.S., tekhn.red.

[Practical work in biological chemistry] Praktikum po biologicheskoi khimii. Moskva, Gos.izd-vo "Sovetskaya nauka," 1957. 292 p.
(MIRA 11:2)

(BIOLOGICAL CHEMISTRY--LABORATORY MANUALS)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5"

SOPIN, Ye.F.

Effect of atropin on the metabolism of phosphorous substances.
Nauk zap. Kyiv. un. 16 no.18:101-110 '57. (MIRA 13:2)
(ATROPIN) (PHOSPHORUS METABOLISM)

SOPIN, Ye.F.

Adaptive regulation of metabolism. Nauk. zap. Kyiv. un. 16 no.20:
55-69 '57 (MIRA 13:3)
(Metabolism) (Adaptation(Biology))

T-2

USSR / Human and Animal Physiology. Metabolism.

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3060

Author : Ferdinand, D. L.; Sopin, E. F.

Inst : Kiev University

Title : Intensity of Regeneration of the Amino Acids Component
of the Nitrogen in Tissues During Avitaminosis

Orig Pub : Nauk. zap. Kiiv's'k. un-t, 1957, 16, No 20, 71-76

Abstract : In rats, where avitaminosis D was not accompanied by starvation, the intensity of regeneration of the amino acid component of the proteins was reduced in the cardiac and skeletal muscles and in the kidneys, while in the liver it remained unchanged. In avitaminosis E, the intensity of regeneration of the amino acid component of the proteins (IR) was reduced in various parts of the central nervous system, in the liver, and in the kidneys. In avitaminosis B₁, the change in the (IR) was comparatively

Card 1/2

3

1C

USSR/Human and Animal Physiology - Metabolism.

V-2

Abs Jour : Ref Zhur - Biol., No 2, 1958, 8391

Author : E.F. Sopin

Inst :

Title : The Rate of Replacement of Substances in B_1 -avitaminosis

Orig Pub : Ukr. Biokhim. Zh., 1957, 29, No 2, 235-241

Abstract : A study was made of the metabolism of inorganic phosphorus, the phosphorus of compounds not easily hydrolyzed and the phosphorus of lipids with P^{32} and of the metabolism of fumaric acid and cholesterol with C^{14} ; the studies were performed on the muscles, brain and liver of pigeons with B_1 -avitaminosis. When B_1 -avitaminosis is present the rate of replacement of phosphoric acid and phospholipids increased in all of the tissues studied; the rate of replacement of cholesterol was reduced. The rate of replacement of phosphorus compounds hydrolyzed with difficulty decreased in the liver and muscles and increased somewhat in the

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USSR/Human and Animal Physiology - Metabolism.

V-2

Abs Jour : Ref Zhur - Biol., No 2, 1958, 8391

brain.

The rate replacement of fumaric acid decreased in the liver
and remained unchanged in muscle and brain.

Card 2/2

SOPIN, Ye.P.

Incorporation of C¹⁴-acetic acid in the components of the aerobic cycle in alloxan diabetes [with summary in English]. Ukr.biokhim. zhur. 29 no.4:445-449 '57. (MIRA 11:1)

1. Kafedra biokhimii ta biofiziki Kiivs'kogo derzhavnogo universitetu im. T.G.Shevchenka.
(DIABETES) (CITRIC ACID) (FUMARIC ACID)

SOPIN, Yevgeniy Fedorovich for Doc ^{Biol} Sci on the basis of dissertation defended
21 Apr 58 in Council of Kiev Order of Lenin State Univ im Shevchenko, entitled
"Metabolism as an adaptation process." (BMMiSSO USSR, 1-61, 21)

SOPIN, Ye.F. [Sopin, I.E.F.]

Metabolism as an adaptive process. Visnyk Kyiv. un.
ser. biol. no.1:149-161 '58. (MIRA 15:6)
(METABOLISM)
(ADAPTATION (BIOLOGY))

SOPIN, Yevgeniy Fedorovich; BOGACH, P.G., dotsent, otd.red.; VLYASHNIKOV,
B.N., red.; KHOKHANOVSKAYA, T.I., tekhn.red.

[Fundamentals of muscle biochemistry] Osnovy biokhimii myshts.
Kiev, Izd-vo Kievskogo univ., 1960. 181 p. (MIRA 13:9)
(MUSCLES) (PHYSIOLOGICAL CHEMISTRY)

SOPIN, Ye.F.

Effect of atropine on metabolism. *Fiziol.zhur.* 6 no.1:67-72
Ja-F '60. (MIRA 13:5)

1. Kiyevskiy gosudarstvennyy ordena Lenina universitet im. T.G.
Shevchenko, kafedra biokhimii i biofiziki. *Fiziol.zhur.* 6 no.1:
67-'72 Ja-F '60. (MIRA 13:5)

(ATROPINE) (METABOLISM)

SOPIN, Ye.F. [Sopin, YE.F.]; GAYDAY, V.M. [Haidai, V.M.]

Effect of vitamins B₁ and PP on the metabolism of citric acid and fumaric acid in radiation injury. Ukr. biokhim. zhur. 33 no.1:57-63 '61. (MIRA 14:3)

1. Kiyevskiy gosudarstvennyy universitet im T.G.Shevchenko, i
Institut pitaniya Ministerstva zdravookhraneniya USSR.
(VITAMINS) (FUMARIC ACID)
(X RAYS-PHYSIOLOGICAL EFFECT) (CITRIC ACID)

SOPIN, Ye.F. [Sopin, YE.F.]

Cholesterol metabolism during various periods of radiation injury.
Vianyk Kyiv.um. no.5. Ser.biol. no.2:129-134 '62. (MIRA 16:5)
(CHOLESTEROL METABOLISM) (X RAYS—PHYSIOLOGICAL EFFECT)

LIPKIN, Nikolay Fedorovich, doktor biol. nauk, prof.; SOPIN, Ye.P.,
red.; BOYKO, V.P., tekhn.red.

[Elements of radiation biology and biochemistry] Elementy
radiatsionnoi biologii i biokhimii. Kiev, Gosmedizdat,
1963. 163 p.

F,

(MIRA 17:3)

L 31284-66 EWT(1)/T JK
ACC NR: AP60202/3

SOURCE CODE: UR/0300/65/037/C02/0251/0259

52

B

AUTHOR: Sopin, Ye. F.; Kucherenko, M. Ye.

ORG: Department of Animal Biochemistry, Kiev State University im. T. G. Shevchenko
(Kafedra biokhimichnyi tvaryn Kyyivs'koho derzhavnoho universytetu)

TITLE: Content and intensity of nucleic acid metabolism in the brain of guinea pigs
during x-ray irradiation

SOURCE: Ukrayins'kyj biokhimichnyj zhurnal, v. 37, no. 2, 1965, 251-259

TOPIC TAGS: biologic metabolism, brain, x ray irradiation, experiment animal, RNA,
DNA, radiation sickness, phosphorus, radioisotope

ABSTRACT: The content and rate of replenishment of RNA and DNA in the brain
of guinea pigs were investigated at different periods of development of acute
radiation sickness induced by whole-body irradiation of the animals with a
2,000 r dose of X-rays. It was shown that the nucleic acid composition in
guinea pig brain varies in different periods of development of the acute
form of radiation sickness. For example, even as early as 30 minutes after
irradiation a drop in the RNA level is observed, which becomes more intense
at the close of the first day. During the 2d-4th days the RNA level is
gradually restored, but at the terminal stage, 5 days after irradiation, it
again decreases slightly.

During the first day after irradiation a tendency is observed toward an
increased DNA level. During the first day the DNA content decreases by 21.4%
compared to the normal. During the 2d and 3d days the DNA level is gradually

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L 31284-66
ACC NR: AP6020243

restored and a tendency toward an increase is noted. By the end of the 4th day the DNA level falls off slightly, and by the end of the 5th day this decrease is intensified. The intensity of P³² incorporation in RNA drops sharply during the first post-irradiation day, then rises substantially, exceeding the normal level by the end of the 2d day, dropping to about one-half by the end of the 3d. Radioactive phosphorus is very slowly incorporated into RNA during the 4th. By the end of the 5th day its incorporation in RNA, compared to its incorporation on the 4th day, has risen sharply. P³² incorporation in DNA decreases substantially during the first day after irradiation, and during the 2d -- it continues to drop. On the 3d day, it rises, approaching the normal. However, P³² incorporation in DNA is strongly inhibited during the 3d and 5th days. Orig. art. has: 4 tables. [JPRS]

SUB CODE: 06, 18, 07 / SUBM DATE: 07May64 / ORIG REF: 011 / OTH REF: 003

Card 2/2 (C)

SOPINA, V.A.

Resistance of endoparasitic protozoans from some species of
amphibians to ethyl alcohol. TSitologija 5 no.3:343-347 My-Je '63.
(MIRA 17:5)
1. Kafeira zoologii bespozvonochnykh Leningradskogo universiteta.

— 10 —

The effects of the resistance to ethyl alcohol in acetabac. VITAMIN D₂ no. 3334-340 Mycotox 165. (MTRA 18:10)

10. Laboratoriya tsitologii siniyektoznykh organizmov i laboratoriya genetiki opakholazykh kletok Instituta tsitologii AN SSSR, Leningrad.

SOPINSKA, Barbara

Paulownia tomentosa Steud. in the life of the peoples in
China and Japan. Wiadom botan 7 no.3/4:230 '63.

1. Ogrod Botaniczny, Uniwersytet, Warszawa.

HORAKOVA,O.; KALAMAR,J.; SOPINSKA,M.; HORAK,F.

The presence of alpha-lipoic acid in natural substances. Cesk.
farm 13 no.3:107-110 Mr'64.

1. Slovensky ustav pro dosk^alovani lekaru, Bratislava; Katedra
biochimie farmaceuticke fakulty a katedra organicke technologie
chemicke fakulty UK, Bratislava.

*

SOPINSKI, Stanislaw

From the experiences of local trade coordination. Przegl drobn
wytwor 12 no.1:12-13 Ja '62.

SOPINSKI, Stanislaw

A correct administration of fixed assets as an important sector in the activities of business enterprises. Przegl
drobnej wytworzosci 12 no.6:2-4 Mr '62.

SOPINSKI, Stanislaw

The limits of unfounded and reasonable rentability.
Przegl drobn wytwor 12 no.7:13-14 Ap '62.

ГАИШ, М. А., Ч., Л.; ГАИШ, М.; ГАИШ, М.; ГАИШ, М.;
ГАИШ, М.; ГАИШ, М.

In the land of sands and creation. Voen. zhurn. 1941, N:2, p. 169.

1. Председатель Совета Министров Туркменской ССР (for Gapurov).
2. Председатель радиотехнической промышленности Совета Туркменской ССР (for Solyayev).
3. Председатель Таджикского исполнительного комитета районного совета депутатов трудящихся Исхакабада (for Karayev).
4. Начальник склада газетной продукции Совета Министров Туркменской ССР (for Avazradov).
5. Начальник Ашхабадских кораблей морской обороны (for Klyuchnikov).
6. Торговый представитель Таджикистана в Китае (for Mulyayev).
7. Советник по вопросам строительства и промышленности Таджикистана (for Shabotov).

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5

THOMA, Jozsef, Kossuth-dijas; SOPKEZ, Gusztav

A 200-meter-high ferrocconcrete chimney constructed by sliding
shuttering. Magy ep ipar 13 no.6: 357-370 '64.

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5"

SUBBOTINA, A.P., uchitel'nitsa, GAYDUKOVA, T.A., uchitel'nitsa,
BARABASH, A.D., unchitel'nitsa, PAVLOVA, M.I.; SOPKIN, G.A.;
ADAYEV, M.U.

Speeches of delegates to the All-Union Teachers' Congress. Biol.
v shkole no.5:10-16 S-0 '60. (MIRA 13:11)

1. Goryachevodskaya srednyaya shkola, predgornogo rayona, Stavropol'-skogo kraja (for Subbotina).
2. Kantemirskaya srednyaya shkola, Voronezhskoy oblasti (for Gaydukova).
3. Srostinskaya srednyaya shkola, Altayskogo kraja (for Barabash).
4. Direktor Yermishinskoy sredney shkoly, Ryazanskoy oblasti; chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Pavlova).
5. Direktor Tigil'skoy sredney shkoly, Kamchatskoy oblasti (for Sopkin).
6. Direktor Kadgaronskoy sredney shkoly, Severo-Osetinskoy ASSR (for Adayev).

(Agriculture—Study and teaching)

SOPKIN, K., brigadir zabeyschikov.

Boring tools hinder our progress. Mast. ugl. 7 no.11:26 N '58.
(MIRA 11:12)

1.5-y uchastek shakty "Chernaya gora" kombinata Kuzbassugol'.
(Boring machinery)

SOPKINA, A.K.; RYABOV, V.D.

Use of thin-layer chromatography for the analysis of certain
diphenols. Zhur. anal. khim. 19 no.5:615-618 '64.
(MIRA 17:8)

I. Moskovskiy institut neftokhimicheskoy i gazovoy promyshlen-
nosti imeni Gubkina, Moskva.

1971, April, 10, 1971, 10:00.

1. Vozvishennyi gospodarstvennyi i tekhnicheskii komitet po gospodarki nafto-gazovym kompleksom (VGA) po SSSR.

2. Vozvishenskiy nauchno-tekhnicheskiy i gazovoye priyaznialnye otdeleniya.

L 62084-65 EPF(c)/EWT(m) Pr-4 RM
ACCESSION NR: AP5016838

UR/0204/65/005/003/0335/0339
547.314.2:547.562:542.952.53

17
16
B

AUTHORS: Ryabov, V. D.; Sopkina, A. K.; Vesova, V. S.

TITLE: Alkanization of phenol by isopropylacetylene

SOURCE: Neftekhimiya, v. 5, no. 3, 1965, 335-339

TOPIC TAGS: alkane, alkylphenol, chemical reaction, acetylene

ABSTRACT: The reactions of phenol with isopropylacetylene were studied in an effort to determine the possibility of separating some intermediate product such as alkenylphenol or any low-molecular compound. The absence of these compounds among the reaction products was explained by the great speed of their subsequent transformation (polymerization, condensation with phenol). The reaction proceeded at 55-80°C for 2-3 hours in a three-outlet flask equipped with a mechanical mixer, a reverse cooler, and a piston burette. Liquid isopropylacetylene was poured under a layer of the phenol-catalyst mixture at a constant velocity and stirred. Isopropylacetylene had a boiling point temperature 26.5-27.5°C, n_{D}^{20} 1.5738, bromine number 228. The reaction mixture was stirred for some time at constant temperature until it became dark red. The catalysts and the excess of phenol were washed off, the raw

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ACCESSION NR: AP5016838

product was dried over magnesium sulfate, and was vacuum distilled into the fractions 70-130°C and 215-250°C. The composition of these fractions was then studied. It was noted that the inhibition by the isopropyl group lowered the reaction capacity of the binary bond 3-methyl-2-(n-oxyphenyl)-butene-1 (I), and made possible its separation from the end products. The presence of beta-isopropylcumaran (V) was explained by the ring formation of 3-methyl-2-(o-oxyphenyl)-butene-1 (II) formed together with 3-methyl-2-(n-oxyphenyl)-butene-1 at the first reaction stage. The separated products of the second stage were: two isomeric diphenols: 2-methyl-3,3-bis-(n-oxyphenyl)-butane (III), and 2-methyl-3-(o-oxyphenyl)-3-(n-oxyphenyl)-6-butane (IV). Orig. art. has: 1 table and 3 figures.

ASSOCIATION: Moskovskiy institut neftkhimicheskoy i gazovoy promyshlennosti imeni I. M. Gubkina (Moscow Institute of the Petrochemical and Gas Industry)

SUBMITTED: 21Mar64

ENCL: 00

SUB CODE: OC, GC

NO REF Sov: 003

OTHER: 000

Card 2/2

RYABOV, A.K.; RYABOV, V.D.

Reaction of tert-butylacetylene with phenol. Khim. org. khim. 1
no. 12:2164-2166 D '65 (KFA 19:1)

1. Moskovskiy institut neftokhimicheskoy i gosudarstvennoy promyshlennosti
imeni akademika Gubkina. Submitted October 29, 1964.

SOKOLOV, A., prof. iur.

Scientific technical conference on the occasion of the
10th anniversary of the Institute of Mining Geology in Sofia.
Rudy 12 no.12/41-442 D '64.

SOPKO, A.

Experience in the introduction of magazine mining at Banska Stiavnica.
p. 260.

RUDY Vol. 3, no. 9, Sept. 1955

Czechoslovakia

Source: EAST EUROPEAN LISTS Vol. 5, no. 7 July 1956

SOPKO, A.

"Mining of ores and minerals in Austria." p. 142

RUDY. Praha, Czechoslovakia, Vol. 7, No. 4, April, 1959

Monthly List of East European Accessions (EEAI), LC., Vol. 8, No. 9, September, 1959
Unclassified.

SOPKO, A.

Mining at the Brussels Fair. p. 243.

RUDY. (Ministerstvo hutniho prumyslu a rudnych dolu) Praha, Czechoslovakia,
Vol. 7, No. 7, July 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 11,
November 1959.

Uncl.

SOPKO, A., prof., inz.

1962 Mining Conference in Leoben, Austria. Rudy 11 no.5:

17.1.1963 My '63.

1. Vysočka škola technicka, Košice.

CZECHOSLOVAKIA UDC 613.633:616.26-003.65(:546.284)-084:622.34

SOPKO, Anton; Chair of Organization and Safety of Work, Faculty of Mining, Technical University (Katedra Organizacie a Bezpecnosti Prace Banickej Fakulty VST), Kosice, Head (Veduci) Prof. A. SOPKO.

"Dust Control in Slovak Ore Mines."

Prague, Pracovni Lekarstvi, Vol 18, No 6 - 7, Aug 66, pp 297-301

Abstract [Author's English summary modified]: Silicosis occurrence in Slovak mines in the last ten years is discussed. Rating of the mines according to the content of free SiO₂ in the air indicates that the mines of non-ferrous ores are the most dangerous, with iron ore mines next. The most dangerous work is drilling, followed by loading, transportation, and auxiliary working functions. Suppression of dust by wet drilling is described. In the period of 1958 - 1960 4 - 8% of all the miners exposed to silica dust became sick with silicosis. 4 Figures, 2 Tables, 4 Czech references. (Manuscript received 26 Nov 65).

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22

SOPKO, Anton, prof. inz. (Kosice)

Fifteenth Miners and Metalists Meeting in Bratislava, Slovakia.
Rudy 12 no. 2 of cover; 1 of cover. File

1. SOFKO, P. F.
2. USSR (600)
4. Alaverdi District - Geology
7. Geological structure of the northern section of the Alaverdi deposits. *(Abstract)*
Izv.Glav.upr.geol.fon. No. 3, 1947.
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

15-57-5-6130

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,
p 62 (USSR)

AUTHOR: Sopko, P. F.

TITLE: Vein Rocks in the Alaverdi Rayón in Armenia
(Zhil'nyye porody Alaverdskogo rayona Armenii)

PERIODICAL: Tr. Voronezhsk. un-ta, 1954, Vol 31, pp 15-40

ABSTRACT: Bibliographic entry
Card 1/1

MALIKHASYAN, E.G.; SOKO, P.F.; CHERNYSHOV, N.M.

Recent data on the age and deposition conditions of quartz porphyries
of Northern Armenia. Dokl. AN Arm. SSR 28 no.2:79-83 '59.
(MIRA 12:6)

1. Institut geologicheskikh nauk AN ArmSSR i Voronezhskiy gosudarstvennyy
universitet. Predstavlene chlenom-korrespondentom AN ArmSSR A.A.
Gabriyelyanom.

(Armenia--Porphyries)

SOFKO, P.F.

Role of stratigraphic, lithologic, and structural factors in the distribution of pyrite mineralization in northern Armenia. *Zakonom. razm. polezn. iskop.* 2:372-395 '59. (MIRA 15:4)

1. Voronezhskiy gosudarstvennyy universitet.
(Armenia--Ore deposits) (Pyrites) (Geology)

SOPKO, Pavel Filippovich; KHACHATURIAN, E.A., otv. red.; SHTIBEN,
R.A., red.izd-va; SARYAN, P.A., tekhn. red.

[Geology of the pyrite deposits of the Alaverdi ore region]
Geologiya kolchedsanrykh mestorozhdenii Alaverdskogo rudnogo
raiona. Erevan, Izd-vo AN Armianskoi SSR, 1961. 169 p.
(MIRA 15:3)

(Alaverdi District—Pyrites)

SOPKO, P.F.

Changes in the enclosing rocks of pyrite deposits in the Lesser
Caucasus. Izv.vys.ucheb.zav.; geol.i razv. 4 no.2:66-75 F '61.
(MIRA 14:6)

1. Bashkirskiy filial AN SSSR.
(Caucasus--Pyrites)

SOPKO, P.F.

Types of structures of pyrite deposits and their ore zones in
the Lesser Caucasus. Sov.geol. '4 no.9:71-81 S '61. (MIRA 14:11)

1. Gorno-geologicheskiy institut Bashkirsogo filiala AN SSSR.
(Caucasus--Pyrites)

SOPKO, P.F.; BELYAYEV, V.I.; ZHILENKO, G.V.

Some data on magmatic rocks of basic and ultrabasic composition in
the southern part of Voronezh Province and their metallogenic signi-
ficance. Dokl. AN SSSR 136 no.2:437-440 '61. (MIRA 14:1)

1. Voronezhskaya kompleksnaya geologorazvedochnaya ekspeditsiya i
Voronezhskiy gosudarstvennyy universitet. Predstavлено akademikom
D.S. Korzhinskim.
(Voronezh Province—Rocks, Igneous)

SOPKO, P.F.

Correaltion of pyritic, lead-zinc, and barite types of mineralization.
Zakonom. razm. polezn. iskop. 5:326-334 '62. (MIRA 15:12)

1. Gorno-geologicheskiy institut Bashkirskogo filiala AN SSSR.
(Ore deposits)

SOPKO, P.F.; CHERNYSHOV, N.M.

Jurassic subvolcanic formations in the Alaverdi ore region. Izv.-
vys.ucheb.zav.; geol.i razv. 5 no.8:85-97 Ag '62. (MIRA 15:11)

1. Voronezhskiy gosudarstvennyy universitet.
(Alaverdi District--Petrology)

~~SECRET~~ (21)
S/011/63/000/001/002/002
A006/A101

AUTHOR: Azizbekov, Sh. A.

TITLE: The Third All-Union Conference on regularities in the formation
and distribution of endogenous mineral resource deposits

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, no. 1, 1963,
126 - 128

TEXT: The Conference was held in Baku from September 18 to 23, 1962; it
was attended by 455 representatives from scientific and industrial geological
organizations including 24 Academicians and Corresponding Members of AS USSR and
AS of various republics, 49 Doctors-Professors and 164 Candidates of Geological
and Mineralogical Sciences. The Conference was opened by Academician D. I.
Shcherbakov, secretary of OGCN, AS USSR. The program of the Conference was di-
vided into three main groups: a) regularities in the formation and distribution
of endogenous deposits in the Caucasus; b) regularities in the formation and
distribution of endogenous deposits of other folding regions of the Alpine cy-
cle; c) general problems of metallogeny. In group a) reports on basic features

Card 1/4

The Third All-Union Conference on...

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of metallogeny and models of detailed metallogenic charts of the Caucasus were delivered by Sh. A. Azizbekov and R. N. Abdullayev (in Azerbaijan), S. S. Mkrtchyan (in Armenia), O. A. Tvalchrelidze and Yu. I. Nazarov (in Georgia) and V. I. Orobey (in the Northern Caucasus); V. I. Smirnov reported on peculiarities in magmatism and metallogeny of the geosyncline and plateau stage in the evolution of the Western section of Northern Caucasus. Reports were delivered on magmatism and metallogeny in the Dashkesan ore region (M. A. Kashkay, M. A. Mustafabeyli) Southern Georgia (V. R. Nadiradze) the Sevan-Akera zone (S. M. Suleymanov) the Alaverdy-Bolina ore region (T. Sh. Gogishvili) and in the small Caucasian intrusives. G. S. Dzotsenidze reported on "Paleogenous volcanism in the Caucasus and metallogeny related to it"; V. N. Kotlyar on "Deposit types related to paleo-volcanism"; papers were delivered on pyrite deposits in the Somkhito-Karabakh and the Sevan-Akera zone (P. F. Sokol); Northern Caucasus (N. S. Skripchenko, V. I. Buadze) the Chubukhi-Tanzutsk ore region (S. Sh. Sarkisyan). Reports were read on polymetallic deposits in Northern Caucasus (A. M. Krasnovidova), North-West Caucasus (G. P. Kornev) and the Mekhmany ore field (N. V. Zaytseva). Other reports dealt with gold (N. Ye. Gukhman, D. G. Salija) mercury (D. V. Abuyev) and rare metal (P. V. Mustafabeyli) mineralization. Group 2 included reports on

Card 2/4

SOPKO, P.F.

Genetic characteristics of pyrite deposits in the Lesser Caucasus
and some characteristics of their distribution. Zakonom.razm.
polezn.iskop. 7:358-359 '64. (MIRA 17:6)

1. Gorno-geologicheskiy institut Bashkirskogo filiala AN SSSR.

JURASEK, Lubomir; SOPKO, Roman

Enzymatic hydrolysis of beech holocellulose by fungi Cerip-
phora puteana (fr) karst. and Trametes gibbosa (Pers.) Fr.
Drevarsky vyzkum no. 2:71-83 '62.

1. Statny drevarsky vyzkumnny ustav, Bratislava.

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5

KIVELEVICH, B.I.; BUNINA, S.I.; SOPLEV, G.A.

Dispensary treatment of chronic forms of pulmonary tubercu-
losis without stopping work. Zdrav.Belor. 4 no.3:52 Mr '58.
(MIRA 13:?)
(TUBERCULOSIS)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5"

YAROVAY, V.G., inzh.; SOPYAKOV, V.I.; TRUSHCHELEV, V.I.; ZALOGIN, N.G.,
kand. tekhn. nauk

Power limit of condensing electric power plants under air pollution
conditions. Elek. sta. 35 no.12:57-67 D '64.

(MIRA 18:2)

1. Vsesoyuznyy gosudarstvennyy proyektnyy institut stroitel'stva
elektrostantsiy (for Yarovoy). 2. Energeticheskiy institut Si-
birskogo otdeleniya AN SSSR (for Sopyakov, Trushchelev). 3. Vse-
soyuznyy ordena Trudovogo Krasnogo Znameni teplotekhnicheskiy insti-
tut imeni Dzerzhinskogo (for Zalogin).

KAS'YANOVA, A.A.; LABAZNIKOV, A.F.; NADLER, Ya.S.; SOPMAN, A.S.

New material for prosthetic devices. Ortop.travm. i protez. 20
no.2:47-48 P '59. (MIRA 12:12)

1. Iz Moskovskogo protezno-ortopedicheskogo zavoda im. K.Marksa
(dir. - V.P. Nikiforov).
(PROSTHESIS
laminated polyamide material (Bus))

SOPCHEN, L.A.; GORLOVSKY, V.G.

Output element of the "Avtooperator" system. Avtom. i prib. no.2:
23-28 Ap-Je '63. (NIKA 18:8)

L. Lischanskiy filial Instituta avtomatiki Donetskogo soveta
narodnogo khozyaystva.

ACCESSION NR: AT4042443

S/0000/64/000/000/0110/0111

AUTHOR: Gorlovskiy, V. G.; Sopochkin, I. A.

TITLE: Electropneumatic digital-analog converter

SOURCE: Vsesoyuznoye soveshchaniye po pnevmo-gidravlicheskoy avtomatike. 5th, Leningrad, 1962. Pnevmo- i gidroavtomatika (Pneumatic and hydraulic control); materialy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 110-111

TOPIC TAGS: automation, automatic control system, pneumatic control system, electropneumatic converter, digital analog converter

ABSTRACT: The paper describes an electropneumatic converter designed to produce an analog pneumatic signal which is proportional to a binary electric signal. The action of the converter is based on transforming the binary electric signal in proportion to the pneumatic conductivity, and then measuring the latter on a divider. The divider consists of a feed throttle and a discharging resistance whose conductance is adjusted in accordance with a binary law. Orig. art. has: 2 figures and 2 formulas.

ASSOCIATION: none

Card 1/2

ACCESSION NR: AT4042443

SUBMITTED: 29Jan64

SUB CODE: IE

NO REF Sov: 000

ENCL: 00

OTHER: 000

Card 1 2/2

S/271/63/000/003/036/049
A060/A126

AUTHORS: Gorlovskiy, V.G., Sopochkin, L.A., Tagayevskaya, A.A.

TITLE: Electropneumatic code converter for control computers

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 3, 1963, 43, abstract 3B251 (In collection "Diskretn. preobrazovately i telemekhan. ustroystva dlya upravlyayushchikh vychisl. mashin.", Khar'kov, 1961, 113 - 119)

TEXT: The authors consider the construction and principle of operation of an electro-pneumatic code converter designed for converting the electrical output signal of a computer into a pneumatic control signal. The principle of operation of the code converter is based on the summing up of the air flows passing through a set of chokes connected in-parallel with different designated flow sections under constant pressure drop on the chokes. To increase the precision of the converter a pneumatic comparison element with a negative feedback loop is used in the device. The signal from the computer is fed in the form of a binary code signal to the windings of the electro-pneumatic valves corresponding to the

Card 1/2

Electropneumatic code converter for control computers

S/271/63/000/003/036/049
A060/A126

code digits. If there is no signal, then all the summing chokes are closed and the pressure at the output of the converter establishes itself as equal to the back pressure. When a signal arrives from the output of the computer a part of the summing chokes depending on the code are connected to the atmosphere. Then on the output chokes a pressure drop is established proportional to the number of open summing chokes. The supply pressure is 2 atm; the back pressure is 0.2 atm; the range of variation of the output pressure is 0.2 - 1.0 atm; the operating voltage is 24 v; the power required is 6 w; the converter error is 1%. The construction of the converter is described in detail. There are 3 references.

A. S.

[Abstracter's note: Complete translation]

Card 2/2

SOPOCKO, Irena

CZÓPEK, Juliusz; PUGACZAWSKA, Halina; SOPOCKO, Irena

Vascularization of the respiratory surface in *Triturus cristatus*
Laur. Pol. morph., Warsz. 5 no.2:93-104 1954.

1. Z Zakladu Zoologii Ogolnej Uniwersytetu Mikalaja Kopernika w
Toruniu. Kierownik: prof. dr H. Szarski
(SALAMANDERS,

Triturus cristatus, vascularization of resp. surface)
(RESPIRATION,

vascularization of resp. surface in *Triturus cristatus*)

~~SOPOCKO~~ Sopocko, S.
POLAND / Chemical Technology. - Safety First Technique.
Sanitation Technique. Chemical Products and Their
Application. Part 11.

H-6

Abs Jour : Referat. Zhurnal Khimiya, No 4, 1958, 11786.

Author : Stanislaw Sopocko.

Inst : Not given

Title : Safety First Technique and Hygiene of Work at Cleaning of
Storage Tanks for Mineral Oil Products.

Orig Pub : Wiadom. naft., 1957, 3, No 7, 18 - 20.

Abstract : Symptoms of poisoning with vapors of mineral oil products (fits of "gaiety", asthenia, loss of consciousness) and safety first regulations for work in tanks are described. Carrying out of medical inspection of workers twice a year and special instruction are recommended. It is necessary to have first aid means at hand. The workers must be pro-

Card 1/2

SOPOTKINA, NY-1

✓ 3075. Chemical structure of thermal polymers of butadiene. A. I. YAKUNCHIK and N. I. SOKOLOVA. *Zhur. Obschei Khim.*, 1956, 26, 2421-5; *Chem. Abstr.*, 1957, 51, 4747. Butadiene polymers prepared at 90°C (sol. polymer) and at 120°C (insol) were studied by ozonolysis, and the decomposition products were identified and included formaldehyde, formic acid, 1,2,4-butane tricarboxylic acid, hexanetetracarboxylic acid, succindialdehyde, and succinic acid. The polymers possess structural regions that can be shown schematically as: 1,4-1,4; 1,4-1,2-1,4; and 1,4-1,2-1,2-1,4 additions. 3S2D21.324

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GOIA, I., prof.; DORCA, N., dr.; FLORESCU, I., dr.; CIURDARIU, P., dr.;
GHERMAN, G.; BACIU, T., dr.; RUB, D., dr.; DERMLA, Z., dr.;
SOPON, E.

The treatment of cerebral and peripheral atherosclerosis with vitamin
B 12. Med. intern. 14 no.10:1253-1262 O '62.

1. Lucrare efectuata la Clinica a II-a medicala, I.M.F. Cluj (director:
prof. I. Goia).

(ARTERIOSCLEROSIS) (VITAMIN B 12)
(BLOOD CHOLESTEROL) (BLOOD PROTEINS) (BLOOD LIPIDS)
(LIPOPROTEINS)

GLIGORE, V., prof.; LICACIU, O., dr.; HANN, K., dr.; SOPON, E., chim.;
SCHEAU, Maria, biol.; PAPP, E., chim.

Research on the disorders of carbohydrate metabolism in chronic
diffuse hepatopathy. Med. intern. (Bucur.) 17 no.9:1077-1084
S '65.

1. Lucrare efectuata in Clinica a II-a medicala Institutul medico-
farmaceutic, Cluj (director: prof. V. Gligore).

SOPORAN, Alexandru

Work for the improvement of professional qualifications. Munca
sindic 6 no.9:25-27 S '62.

1. Președinte al comitetului sindicatului uzinei Industria Sirmei,
Cimpia Turzii.

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5

SOPOT, V., podpolkovnik

Use progressive practice in training engineering units. Voen.-inzh.zhur.
96 no.9:6-9 S '52. (MIRA 12:3)
(Military engineering--Study and teaching)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5"

PARINA, Ye.V.; SOPOTSINSKAYA, Ye.B.

Changes with age in oxidative phosphorylation of the brain.
Uch.zap.KHGU 68:43-49 '56 (MIRA 11:11)

1. Kafedra biokhimii Nauchno-issledovatel'skogo instituta biologii i
biologicheskogo fakul'teta Khar'kovskogo ordena trudovogo krasnogo
znameni gosudarstvennogo universiteta imeni A.M.Gor'kogo.
(AGE) (BRAIN) (PHOSPHORYLATION)

SOPOTSINSKAYA, Ye.B.; GORDIYENKO, E.A. (Khar'kov)

Respiration, glycolysis, and the level of high-energy compounds
(adenosine triphosphoric acid, phosphocreatine) in brain tissues
in carbon monoxide poisoning. Pat. fiziol. i eksp. terap. 5 no.2:
53-56 Mr-Ap '61. (MIRA 14:5)

1. Iz biokhimicheskoy laboratorii (rukododitel' S.R.Frenkel') Instituta
gigiyeny truda i profzabolevaniy.
(BRAIN) (CARBON MONOXIDE--PHYSIOLOGICAL EFFECT)
(PHOSPHORIC ACID) (RESPIRATION) (GLYCOLYSIS)

SCHTS'KO, Ye. A. and KALINOVSKIY, A. B.

"Some Empirical Rules Governing the Wind Distribution in the Low Atmosphere"
Sb. Tr. Leningr. Gidromet. in-ta, No 3, 1954, 59-64

Comparison is made between wind velocity in the low atmosphere, obtained by means of balloon pilot observations at Pavlovo Aerological observatory, with computed values of geostrophic wind. The results pertain to anticyclonic circumstances. The relationship between the actual and geostrophic wind velocity is linear and of 0.67 ratio, (RZhFiz, No 10, 1955)

156

AUTHORS: Gandin, L. S., Laykhtman, D. L., Sopots'ko, Ye.A., Shleneva, M. V.

TITLE: Problems in Dynamic Meteorology (Zadachnik po dinamicheskoy meteorologii)

PUB. DATA: Gidrometeorologicheskoye izdatel'stvo, Leningrad, 1957,
182 pp., 3000 copies.

ORIG. AGENCY: None given

EDITORS: Laykhtman, D. L., Professor; Vlasova, Yu. V.; Tech. Ed.:
Braynina, M. I.

PURPOSE: The book serves as a textbook for meteorological departments of
hydrometeorological institutes.

COVERAGE: The problems and their solution comprise the practical exercises
for a course in dynamic meteorology. The problems are grouped
in specific units as can be seen from the table of contents.
Explanatory notes are attached to every chapter and some basic
data necessary for solving the problems are inserted at the end.
Author mentioned: Ludin, M. I. There are no references.

Card 1/7

SOPOTS'KO, Yu.L., inzhener.

Experience in using precast reinforced concrete in house construction. Stroi.prom.33 no.1:45-46 Ja'55. (MLRA 8:3)
(Hungary--Precast concrete construction)

SOPOTS'KO, Yu.L. (Moskva)

Designing prestressed circular guyed construction elements. Stroi.
mekh. i rasch. soor. 2 no.6;48-53 '60. (MIRA 13:12)
(Roofs, Shell)

SOPOV, B.V., insh.

KNSh-3, 6 mounted rod weeder. Trakt.i sel'khozmash. no.1:33
Ja '60. (MIRA 13:4)

1. Povolzhskaya mashinoispytatel'naya stantsiya.
(Agricultural machinery) (Weed control)

AID P - 2968

Subject : USSR/Electricity
Card 1/1 Pub. 29 - 18/35
Authors : Shimanskiy, Yu. V., Eng., and D. P. Sopov, Electrician
Title : Transportable high-frequency telephone
Periodical : Energetik, 5, 23-24, My 1955
Abstract : The authors developed this telephone for communication over power circuits. A brief description is presented. One diagram of connections.
Institution : None
Submitted : No date

SOPOV, Grigoriy Khristoforovich; IGNATENKO, Georgiy Timofeyevich; KLEYNMAN,
M.Ya., red.; IZMOLDINA, S.I., tekhn. red.

[Analysis of the economic activities of the state farm] Analiz
khoziaistvennoi deiatel'nosti sovkoza. Stalingrad, Stalingrad-
skoe knizhnoe izd-vo, 1960. 52 p.
(MIRA 14:11)
(State farms)

SOPOV, Grigoriy Khristoforovich; IGNATENKO, Georgiy Timofeyevich;
KLEYNMAN, M.Ya., red.; IZHboldina, S.I., tekhn.red.

[Analysis of the economic operation of a state farm] Analiz
khoziaistvennoi deiatel'nosti sovkhoza. Stalingrad, Stalin-
gradskoe knizhnoe izd-vo, 1960. 52 p.
(State farms--Accounting) (MIRA 14:1)

SOPOV, Grigoriy Khristoforovich; TIKHONOVA, Ye.M., red.; PROKOF'YEVA,
L.N., tekhn. red.

[Business accounting in the state farm] Vnutrisovkhoznyi khos-
raschet. Moskva, Sel'khozizdat, 1963. 118 p. (MIRA 16:7)
(Volgograd Province—State farms—Finance)

DEMISOV, Grigoriy Arsent'yevich; SOPOV, Grigorij Khrystoforovich;
SHERemet, Leonid Davidovich; DEVOCHEKIN, N.I., red.

[The "Krep!" state farm] Sovkhoz "Krep!", Volgograd,
Nizhne-Volzhskoe knizhnoe izd-vo, 1964. 39 p.
(MIRA 18:2)

SOPOV, I.

Hydraulic coal mining. Nauka i zhyttia 12 no.1:8-10,16 Ja '63.
(MIRA 16:3)
(Donets Basin--Hydraulic mining)

Conjugated systems. XXVI. Synthesis and properties of α -chlorobutadiene. A. A. Petrov and N. P. Smirnov (Tashkent Aviat. Inst.). *J. Gen. Chem. (U.S.S.R.)* 19, 1801 (1943) (English summary); cf. C.A. 39, 9351 (1945). It was shown that the action of KOH on $(\text{CICH}_2\text{CH}_2)_n$

Conjugated systems. XXVI. Synthesis and properties of α -chlorobutadiene. A. A. Petrov and N. P. Sushko, Chemnici Lab.

(Tashkent Aviat. Inst.). *J. Gen. Chem. (U.S.S.R.)* 15, 151-7 (1945) (English summary); cf. *C.A.* 39, 9261. It was shown that the action of KOH on $(\text{CICH}_2\text{CH}_2)_n$ leads to the formation of C_2H_4 (20-25%).

It was shown that the action of KOH on (CICH₂)_n Butadiene (340 cc.) gave CICH₂-CH₂-CH=CH₂.

yields pure $\text{CICH}_2\text{CHCl-CH}_2\text{Cl}$. (cont'd.) 90% pseudobutylene (II) in 1000 cc. CHCl_3 was dibromide (probably $\text{CICH}_2\text{CHBr-CH}_2\text{Br}$) treated at -5° to -10° with 122 g. Cl with goal stirring $3\text{-}3.5^\circ$, $d_4^{\circ} 1.9030$, $n_D^{20} 1.5678$. To 100% excess of $\text{I}, \text{I}'\text{-dichloro-2-butene}$, by $38\text{-}45^\circ$, $d_4^{\circ} 1.255$, alc. KOH there was added, at reflux, 10 g. I; within 1, $\text{I}, \text{I}'\text{-dichloro-2-butene}$, by $70\text{-}80^\circ$, and 90 g. higher boiling 10 min. 87% of the Cl was found to have been cleaved products. Repeated distn. gave pure $\text{I}, \text{I}'\text{-dichloro-2- to 10% oxyethoxyid di-Br ether}$. CaHgO_2 was 60.5% butene (I), by $74.5\text{-}5.5^\circ$, $d_4^{\circ} 1.1625$, $n_D^{20} 1.4660$. I (10 g.), 1.5° , $b_7\text{-}2.2^\circ$, $d_4^{\circ} 0.8718$, $n_D^{20} 1.2426$. Treatment of this was mixed with 8 g. pyrid. KOH and heated on a steam $\text{CICH}_2\text{CHCl-CH}_2\text{Cl}$, with power. KOH or alc. KOH, as bath which caused a vigorous reaction to take place with above, gave only chloroprene. II (7.7 g.), 0.1 g. hydroquinone, of crude chlorobutadiene and small amts. of C_6H_6 ; quinone, 30 cc. MeOH, and 30 g. H_2O_2 were treated slowly with over hydroquinone gave I-chlorobutadiene (II) with 23 g. iodine to yield 78% $\text{I}\text{-chloro-4-dec-3-enoate}$ (70°), b. $63.5\text{-}6^\circ$, $d_4^{\circ} 0.8680$, $n_D^{20} 1.4712$, which I-butene , by $84\text{-}45^\circ$, $d_4^{\circ} 1.7577$, $n_D^{20} 1.5625$; this was polymerizes readily on standing even in a sealed vessel, treated with alc. KOH (30% excess) at reflux for 15 min. Heating in a sealed tube with excess Na_2CO_3 soln. causes to yield 73% $\text{I-chloro-3-methoxy-1,3-butadiene}$, b. 87.5° but 6.33% hydrolysis of the Cl, while the use of 10% 7.0° , $d_4^{\circ} 1.0087$, $n_D^{20} 1.4476$; shaking of this with 5% NaOH gave 21.8% hydrolysis. Heating of II with maleic H_2SO_4 gave $\text{I-chloro-3-oxido-2-one}$, b. 34° ; ρ -nitrophenyl-anhydride gave a resinous polymer. Bromination of II by Br_2 , m. 142° ; 2,6-diisopropenylbenzene, m. $123\text{-}3^\circ$ in CHCl_3 leads to addn. of but 1 mole of Br to give the

(, M. Knoblauch

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142-114 METALLURGICAL LITERATURE CLASSIFICATION

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APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652420006-5"

Chlorination of butadiene and properties of the chlorides.
 A. A. Petrov and N. P. Sopov (Leningrad Inst. Aviation
 Engrs.), J. Gen. Chem. (U.S.S.R.) 17, 1105-10 (1947) (in
 Russian).—Butadiene was chlorinated under conditions
 given previously (C.A. 40, 6400). Distn. of the low-
 boiling fraction (b_5 40-5°, d_4^{25} 1.1383, n_D^{20} 1.4800) gave
 18% (on wt. of the 40-5° fraction) pure 1,2-dichloro-3-
 butene, which showed that the low-boiling fraction con-
 tained appreciable amounts of dichlorobutane (evidently
 2,3-isomer) if the butadiene used was the unpurified 90%
 butadiene, contg. 10% pseudobutylene, as specified by
 Kiebanash, Sorokina, and Khavkin (C.A. 42, 8144). The
 amt. of the std. product tends to rise with increased
 opportunity of butadiene to form low polymers. Distn.
 of the high-boiling fraction of the chlorides gave a fraction,
 b_5 110-30°, from which it was possible to isolate the tetrachloride, m. 73-4°, but this isolation tended to be more
 difficult as the degree of chlorination was increased. The
 110-30° fraction contains less Cl than theoretically re-
 quired for the tetrachloride and consists of the tetrachloro-
 ride isomers and polymers of butadiene. The following
 yields were obtained in the study of chlorination under
 various conditions: 340 g. butadiene in 1000 cc. CHCl₃
 and 112 g. Cl gave 36% dichlorides (30 g. 1,2-isomer and
 48 g. 1,4-isomer); 650 g. butadiene and 210 g. Cl in 1000
 cc. CHCl₃ gave 20% dichlorides (40 g. 1,2- and 35 g. 1,4-
 isomers); 650 g. butadiene and 312 g. Cl in 1000 cc. CHCl₃
 gave 24% dichlorides (64 g. 1,2- and 61 g. 1,4-isomers);
 300 g. butadiene and 110 g. Cl in 550 cc. petr. ether gave
 33% dichlorides (38 g. 1,2- and 25 g. 1,4-isomers). To
 40 g. CH₂:CHCHClCH₂Cl in 50 cc. CHCl₃ was added
 slowly with cooling 10 cc. Br in 15 cc. CHCl₃; after
 washing with 80% soda soln. there was obtained 73% of a
 mixt. of liquid 1,2-dichloro-3,4-dibromobutene, b_5 120-3°
 d_4^{25} 1.0088, n_D^{20} 1.5848, and a solid isomer, m. 81.5-3°

(from EtOH; 120%), which were sepd. by freezing. In
 agreement with data of Kiebanash, solid KOH gives
 CH₂:CHCH:CHCl from the 1,4-dichloride and chloro-
 propane from the 1,2-dichloride. However, the action of
 alc. KOH on the dichlorides was found to be different from
 that given by Kiebanash: the 1,2-dichloride gives
 chloroprene, but the 1,4-dichloride gives almost exclu-
 sively the di-Et ether of ethylene glycol; the same result
 is obtained with MeOH-KOH; similar reactions take
 place when (BrCH₂CH₂)_n or BrCH₂CH:CM_nCH₂Br are
 used. To 30 g. KOH in 127 cc. MeOH heated on a steam
 bath was added 20 g. (CICH₂CH₂)_n and the mixt. was re-
 fluxed 3 hrs. to give 13.5 g. (MeOCH₂CH₂)_n, m. 48.5-3°,
 d_4^{25} 0.9088, n_D^{20} 1.4280; 6 g. of this in 20 cc. CHCl₃ with 8 g.
 Br in 5 cc. CHCl₃ gave 77% (MeOCH₂CH₂Br)_n, m. 84-5°
 (from EtOH), m. 108°. Similarly there were prepd.
 (EOCH₂CH₂)_n, m. 72-2.5°, d_4^{25} 0.8718, n_D^{20} 1.4266, and
 (EOCH₂CH₂Br)_n, m. 29-30°, b_5 119.5-20.8°. (CICH₂CH₂
 CH₂)_n (10 g.) in 15 cc. CHCl₃ with 4.5 cc. Br in 5 cc.
 CHCl₃ gave 98% 1,4-dichloro-2,3-dibromobutene, m. 99.75-
 100.25° (from EtOH). To 7.7 g. 1-chlorobutadiene in 30
 cc. EtOH was added 30 g. Hg oxide and 25 g. Iodine in
 small portions with cooling and shaking; diln. of the
 filtered mixt. with water gave 61% $CH_2CH(OEt)CH_2CH_2Cl$,
 CH_2Cl , m. 95.5-6°, d_4^{25} 1.6516, n_D^{20} 1.5319; this (10 g.)
 refluxed 1 hr. with excess alc. KOH and gave 51% (1-
 ethoxyvinyl)acetylene, b. 101.5-2.5°, d_4^{25} 0.8300, n_D^{20} 1.4446;
 this (0.5 g.) brominated with 6 g. atoms Br with cooling,
 followed by boiling with 5 g. Zn shavings, gave MeEtCO
 (dinitrophenylhydrazone, m. 115°) to prove the structure
 of the iodo deriv. Bromination of 1-chlorobutadiene gives a
 product b_5 83-3.5°, d_4^{25} 1.0000, n_D^{20} 1.5676, which isomer-
 izes on standing to a lacrymatory product b_5 80.5-90°, d_4^{25}
 1.0734, n_D^{20} 1.5708; evidently an isomerization of the 1,2-
 dibromide into the 1,4-isomer takes place. G. M. K.

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ACCESSES AND PROPERTIES INDEX

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Diene syntheses with halo dienes. I. Condensation of monohalobutadiene with α,β -unsaturated aldehydes and ketones. A. A. Petrov and N. P. Sogay (Leningrad Aviation Instrument Inst.). *J. GKh Chem.* (U.S.S.R.) 17, 1296 (1962) (1967) (in Russian). - Chloroprene (17.7 g.), 11.2 g. acrolein, 0.1 g. pyrogallol, and 30 cc. PhMe heated in a sealed tube 18 hrs. at 95-100° gave 0.6 g. rubbery polymer and 35% *p*-chlorotetraphenylbutenedialdehyde, bp 104-6°, d₄²⁰ 1.1200, n_D²⁰ 1.5233, which on standing readily gives a trimer, m. 107-8° (from EtOH-PhMe), the monomer gives a semicarbazone, m. 151-4° (from aq. EtOH); and a *p*-nitrophenylhydrazone, m. 150-8° (from aq. EtOH); *p*-dinitrophenylhydrazone, m. 103-7° (from EtOH). Oxidation of the aldehyde gave *p*-chlorotetraphenylbenzene, and, in 10% EtOH, the aldehyde (12 g.) in 45cc. MeCO, treated with 5 cc. 10% KOH over 15 min., with stirring and cooling, stirred 2 hrs., neutralized with 5% H₂SO₄, and exdt. with PhMe, gave 90% of the *dieno*-ketone, *C*₂₂H₁₄O₂, bp 154-7°, d₄²⁰ 1.1176, n_D²⁰ 1.5210, which gives a semicarbazone, m. 140-2° (from dil. EtOH). Chloroprene (8.9 g.) added to a soln. of McCOC(=CH₂)₂Cl (from 11 g. ethoxybutadiene and 30 cc. 5% H₂SO₄), followed by exdt. with 20 cc. PhMe, after satis. with (NH₄)₂SO₄ in 20cc. PhMe and heated 12 hrs. in a sealed tube to 95° gave 1.2 g. of yellow tarry polymer and 35% *p*-chlorotetraphenylbenzene, bp 120-20.5°, d₄²⁰ 1.1210, n_D²⁰ 1.5232; *p*-dinitrophenylhydrazone, m. 121-3° (from dil. EtOH); *p*-nitrophenylhydrazone, m. 100-1°. When this ketone was distd. from S.

only a trace of HS was formed and the material was substantially unchanged. *CH₃C₆OBr(C₆H₅)* (12 g.) was shaken with 100 cc. 5% H₂SO₄ at 50-60° and the resulting McCOC(=CH₂)₂Cl was exdt. by 20 cc. PhMe from the soln. after satis. with (NH₄)₂SO₄; this soln., treated with 10 g. chloroprene and heated in a sealed tube 18 hrs. at 95°, gave 2.1 g. of a rubbery polymer and *DL*-*p*-chlorodihydronaphthalene, bp 120-5-31°, d₄²⁰ 1.1740, n_D²⁰ 1.5112; semicarbazone, m. 205-6°; *p*-nitrophenylhydrazone, m. 219-20°, 2.5 g. of this ketone distilled from 2 g. S gave 1.3 g. *p*-C₆H₅COMe, bp 94°. Heating 2.8 g. CHCl-C₆H₅CO₂Cl with 2.5 g. acetone in 8 cc. PhMe 18 hrs. at 95° gave 1 g. leathery polymer and traces of a product similar to that from the condensation of acrolein with chloroprene (13 g.) and 5.4 g. acrolein in 20 cc. PhMe. Bromoprene (13 g.) and 5.4 g. acrolein in 20 cc. PhMe heated 12 hrs. at 100° gave 3.4 g. of a dark hard rubbery polymer and 54% *p*-bromotetraphenylbutenedialdehyde, bp 121-3°, which immediately forms a trimer, m. 147° (from PhMeEtOH). Bromoprene (5.9 g.) and McCOC(=CH₂)₂Cl (from 6.2 g. ethoxybutadiene) in 20 cc. PhMe heated 12 hrs. at 100° gave 0.55 g. of a polymer and 51% *p*-bromotetraphenylbenzene, bp 133-3°, d₄²⁰ 1.1170, n_D²⁰ 1.5232; semicarbazone, m. 181-3° (from dil. EtOH); *p*-nitrophenylhydrazone, m. 100-1°. G. M. Kosolapoff

Condensation of bimini chlorophenone and bromophenone with mercaptoacetic. A. A. Peters and J. J. Soper. Art.-
Instrument Inst., Lexington. *J. Org. Chem.*, **11**, 42-43 (1946).
U.S.S.R. 77, 2228-34 (1947) (in Russian); cf. C. A. 42,
22284. Cl-H-CH₂CO (1.06 g.), 20 ml. tech. bromine,
and 0.1 g. hydroquinone in 30 ml. H₂O. Flame heated in sealed
tubes 12 hr. at 130-150° gave 80% *1-(mercapto-3-phenoxy-*
butyl)-2,2-dihydro-3-hydroxy-3-pyridinecarboxylic acid (b.p.
260°, dec. 305-310°), 1.472 g.; thus (5.4 g.) boiled 5 hrs.
with 3 g. NaOH, 5 ml. H₂O, and 10 ml. EtOH, then
acidified by 25% H₂SO₄ and evap'd. with EtOH, gave 85% -
3-(mercapto-2,2-dihydro-3-hydroxy-3-pyridinecarboxylic acid), m. 170°-172°-173°.
Heating a
1.015 g. sample at 170° for 12 hr. t. 125°
melted at 175°. The nitrite (5.4
g.) gave the same acid (yield not deadl.). The nitrate (5.4
g.) 1.35 ml. H₂SO₄, and 12 ml. MeOH heated in a sealed
tube 3 hrs. at 150° gave 71% *1-(mercapto-3-phenoxy-3-pyridinecarboxylic acid)*. Reduction of the
acid by 70.5° 45% 0.0946 g., m. 140-142°. Reduction of the
nitrite (5.4 g.) by 5 g. Na in 35 ml. EtOH gave 75% *1-(mercapto-3-phenoxy-3-pyridinecarboxylic acid)*, m. 160-170.5°, n_D
1.4940. *1-(mercapto-3-phenoxy-3-pyridinecarboxylic acid)*, m. 160-170°, n_D 1.4940. In 20 ml. MeOH heated 18 hrs. to 170-175° in a sealed
tube gave a main fraction, 1.6 g., m. 160-170°, which on
standing for 7 d. solid nitrite (5.4 g.), m. 180° (from petr.)
was identified as *4-chloro-3-phenyl-3-pyridinecarboxylic acid* in the
ether. Identified as *4-chloro-3-phenyl-3-pyridinecarboxylic acid* in the
ether. Identical with the nitrite described above.
In addition, some dimers of chlorophenone were found as above
intermediate fractions. Hydrolysis of the nitrite as above
yielded NaOH, gave 97% *4-chloro-3-phenyl-3-pyridinecarboxylic acid*, m. 160-170° (from H₂O), while alkali
carbonate and m. 160-170° (from H₂O), while alkali
hydroxide by NaOH-H₂SO₄, m. 160-170°, redissolved
this acid, b.p. 117.5-120°, d₄₂ 1.162, n_D 1.457%; reduction
of the nitrite by Na-BH₄ gave 50% *4-chloro-3-phenyl-*
pentenamine, identical with that described above.
K₂ and 19.5 g. Isoniazide, stabilized by propylene,
heated 18 hrs. to 170-175° in 20 ml. MeOH gave 31% e.
bromine-*3-(mercapto-3-pyridinecarboxylic acid)*, m. 167°, b.p.
ether, which on hydrolysis by alc. NaOH gave 95% *4-*
bromo-3-(mercapto-3-pyridinecarboxylic acid), m. 132.5-135° (from
ether). Thus, in ether occurs a same character of reagent
polarization as is observed in reactions with unsat'd. alde-
hydes or ketones.

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Conjugated systems XXXVI. Condensation of diene hydrocarbons with methacrylic acid and methyl methacrylate. A. A. Petrov and N. P. Sajov. *Zhur. Obshch. Khim.* (L. Gru. Chem.) 18, 1751-8 (1948). Cf. C. A. 42: 881d; Aleksyev, C. A. 35, 3889; $\text{CH}_2/\text{CMeCO}_2\text{H}$ (I) (8.6 g.), 10 ml. butadiene, 15 ml. PhMe, and 0.1 g. pyrogallol in 12 hrs. at 150° give 80% *1-methyl-3-pylohexene-1-carboxylic acid* and (II), m. 77.5-8° (from H₂O); *MeCl* gives the *chloride*, b.p. 82-2.5°, d₄²⁰ 1.0925, n_D²⁰ 1.4980; *amide*, m. 89-9.5° (from H₂O). $\text{CH}_2/\text{CMeCO}_2\text{Me}$ (III) (11.5 g.), 10 ml. butadiene, 15 ml. PhMe, and pyrogallol in 12 hrs. at 150° give 12% II. *Me ester*, b.p. 79°, d₄²⁰ 0.9944, n_D²⁰ 1.4889; on hydrolysis by 10% NaOH it yields II. Similar condensation of I with chloropropene (12 hrs., 140-150°) gave much polymeric matter and 39.7% of mixed 3- and 4-*chloro-1-methyl-3-pylohexene-1-carboxylic acids*, m. 125-30° (from water); *mixt. of chlorides*, b. 118.5-19°, d₄²⁰ 1.2425, n_D²⁰ 1.5040; *amide mixt.*, m. 90-9° (from H₂O). Similarly, chloroprene and III in 12 hrs. at 130° gave the *Me ester* of the above acid *mixt.*, b.p. 110-112°, d₄²⁰ 1.1127, n_D²⁰ 1.4914 (40% yield). 2,3-Dimethylbutadiene and I in 12 hrs. at 150° gave 72% 1,3,4-trimethyl-3-pylohexene-1-carboxylic acid, m. 65.5-70.5° (from 30% AcOH), which gives the *chloride*, b.p. 110-23°, only in impure state on heating with SOCl₂; III in this condensation gave 70% of the corresponding *Me ester*, b.p. 103-3.5°, d₄²⁰ 0.9990, n_D²⁰ 1.4600. Cyclopentadiene and I in 12 hrs. at 150° gave 71% *1-methyl-2,5-endomethylene-3-pylohexene-1-carboxylic acid*, b.p. 134-3°, m. 65-6° (from 30% AcOH); *chloride*, b.p. 80-8°, d₄²⁰ 1.1323, n_D²⁰ 1.4930; *amide*, m. 152-3° (from water);

III in this condensation gave 70.6% of the corresponding *Me ester*, b.p. 86.5-87°, d₄²⁰ 1.0929, n_D²⁰ 1.4728.
G. M. Kosolapoff

*CH**11*

Chemistry of enyne systems I. Order of addition of bromine to vinylacetylene. A. A. Petrov and N. P. Sopov (Inst. Aviation Instrument Construction, Leningrad). Zhur. Obshch. Khim. [J. Gen. Chem.] 20, 708-19 (1950).—Addn. of 100 g. Br in 150 ml. CHCl₃ to 104 g. CH₂CHC≡CH in 500 ml. CHCl₃ at -8° to -12°, followed by removal of volatiles below 40° in vacuo, gave 100% total products, sepd. by fractionation into 55% crude 1,2-dibromo-1,3-butadiene (I), bp 43.6°, d₄²⁰ 1.0040, n_D²⁰ 1.5792; 40% 1,4-dibromo-1,2-butadiene (II), bp 70.2°, d₄²⁰ 1.0084, n_D²⁰ 1.6000; and 5% 3,4-dibromo-1-butyne (III), which formed an admist. with the 1st compd. The I+III mixt. with NH₃-AgNO₃ gave C₆H₇Br₂, lg., and the unreacted I, bp 43°, d₄²⁰ 1.0530, n_D²⁰ 1.5802, which also results from the I+III mixt. with cold alc. KOH; on heating such a mixt. 1 hr., 40% of the Br is ionized, yielding a mixt. of products including some BrO derivs.; oxidation of I+III yields BrCH₂CO₂H, CO₂, and CO₂H₂. Oxidation of II with KMnO₄ gave BrCH₂CO₂H; heating II 1 hr. at 100° gave 60% isomerization to the 1,3-diene, which polymerized, while similar heating for 4 hrs. in the presence of HBr-CuBr gave a mixt. of I and III (47% of latter); II gives 86% ionic Br immediately with alc. KOH, while brief warming detached the residual Br with formation of 1-bromo-3-butene-1-yne, yielding CH₂CHC≡CH with alc. KOH.

G. M. Koskland

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Chemistry of enyne systems. I. The order of addition
of bromine to vinylacetylene. A. A. Petrov and N. P.
Sokov. *J. Gen. Chem. U.S.S.R.* 20, 745-55 (1950) (Eng.
translation). See *C.A.* 44, 7751c. R. M. S.

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Preparation and transformations of vinylcyclohexadienyl hydrocarbons. A. A. Petrov and N. P. Sopov. *Dobledy Izd. Nauk S.S.R.* 79, 811-13(1960).—C₇H₁₀ and its homologs were condensed with MeCOCl:CII and the resulting ketones treated with MeMgI to form the cyclohexadienylmethylcarbinols. One was obtained in pure state: α,ω -dimethyl-1,4-cyclohexadiene-1-methanol, b.p. 97.5-8.0°, d₄²⁰ 0.9726, n_D²⁰ 1.5012. Dehydration of the alcs. from divinyl, isoprene, or diisopropenyl by slow distn. *per se* or with (CO₂) gave alicyclic hydrocarbons, while distn. with a crystal of borax gave aromatic hydrocarbons. Only the latter were obtained from the alcs. derived from piperylene or diisopropenyl. These were secured *1-isopropenyl-1,4-diene* or *1-isopropenyl-1,4-cyclohexadiene* (I), b. 172-6°, d₄²⁰ 0.8086, n_D²⁰ 1.5216; and its α -Me (II), b. 103-6°, d₄²⁰ 0.8803, n_D²⁰ 1.5156, and 4, β -di-Me deriv., b.p. 97.5-100.5°, d₄²⁰ 0.8810, n_D²⁰ 1.5158; *iso-Pr*, b. 151-3°, d₄²⁰ 0.8640, n_D²⁰ 1.4946; *meta-Pr*C₆H₅M₂, b. 174-5°, d₄²⁰ 0.8772, n_D²⁰ 1.5006; the *p*-isomer, b. 174-6°, d₄²⁰ 0.8888, n_D²⁰ 1.4948; *1,3,5-iso-Pr*C₆H₅M₂, b. 194-8.5°, d₄²⁰ 0.8785, n_D²⁰ 1.5048; and the *1,3,4*-isomer, b. 197-9°, d₄²⁰ 0.8741, n_D²⁰ 1.5004. The isopropenylcyclohexadienes isomerize into the resp. isopropylbenzenes readily on warming with HCl to 100°, the presence of an α -Me group being a great facilitating factor, since dehydration of such alcs. invariably yields only the aromatic derivs. Bromination of I gave a solid tetra bromide, m. 118-14°, while II gave a tetrabromide, m. 120°. I with 5% KMnO₄ gave PhAc only; heated with maleic anhydride it gave (after hydrolysis) G. M. Kosolapoff

SOPOV, N. P.

USSR/Chemistry - Hydrocarbons

11 Aug 51

"Preparation and Transformations of Vinylcyclohexadienic Hydrocarbons," A. A. Petrov, N. P. Sopov

"Dok Ak Nauk SSSR" Vol LXXIX, No 5, pp 811-813

Synthesized vinylcyclohexadienes according to A. A. Petrov, "Zhur Obshch Khim" Vol X, 1682, 1940; "Dok Ak Nauk SSSR" Vol LIII, 531, 1946, and describes their properties. Brief heating with HCl isomerizes these compds into aromatic hydrocarbons.

210724

SOPOV, N.P.

USSR/Chemistry - Diene Syntheses

Apr 52

"Synthesis and Properties of Some Isomers, Homologues and Analogues of α -Terpineols Prepared on the Basis of 1,3-Diene Hydrocarbons," A. A. Petrov, M. P. Sopov, Chem Lab of Leningrad Inst of Avn Instruments

"Zhur Obshch Khim" Vol XXII, No 4, pp 591-602

Describes the synthesis of secondary and tertiary hydroaromatic alcs from 1,3-diene compds and unsatd aldehydes and ketones. Gives the structure and phys characteristics of the compds obtained.

224T34

SOPOV, N. P.

MAY 52

USSR/Chemistry - Aromatic Hydrocarbons

"Some New Alycyclic Isomers of Aromatic Hydrocarbons,"
A. A. Petrov, N. P. Sopov, Leningrad Inst of Aviation
Instrument Building

Zhur Obshch Khim, Vol 22, No 5, pp 890-897

In condensation of 1,3-diene hydrocarbons, such as
entadiene, isoprene, and piperlyne, with methyl
acetylenyl ketone, acetyl cyclohexadiene-1,4, and
its 2- and 4-methyl substituted products are obtained.
The latter 2 compds had not been described previously.
The action of CH_3MgI on these ketones yielded the new
corresponding hydroaromatic tertiary alcs, i.e.,

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dimethyl-(cyclohexadiene-1,4-yl)-carbinol and its
homologs. By the dehydration of these alcs, the
isomers of cumene and of cymenes, i.e., isopropenyl
cyclohexadiene-1,4, 4-methyl-isopropenyl cyclohexa-
diene-1,4, and impure 2-methyl isopropenyl cyclohexa-
diene-1,4 were obtained. These compds had not been
investigated previously. All these compds readily
isomerize under the influence of HCl to form cumene
and isomers of cymene. With Br, they yield cryst
tetrabromides.

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